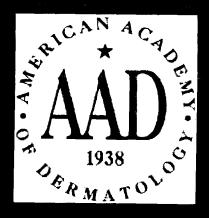
# High SPF Sunscreens: a Dermatologist's Viewpoint Mark Naylor, M.D.



## Theoretical Effect of SPF on Exposure Reduction

Lifetime UV exposure reduction in the general population can be accomplished by low SPF (4-15) preparations

Low SPF preparations are inadequate for high risk individuals

#### High Risk Individuals

Individuals with actinic keratoses or skin cancer

Individuals at high risk for melanoma Individuals with outdoor occupations

Individuals who desire minimal photoaging

Individuals with photosensitivities

#### Melanocytic Progression

Genetic abnormalities are UV-induced Complete protection from UV halts progression

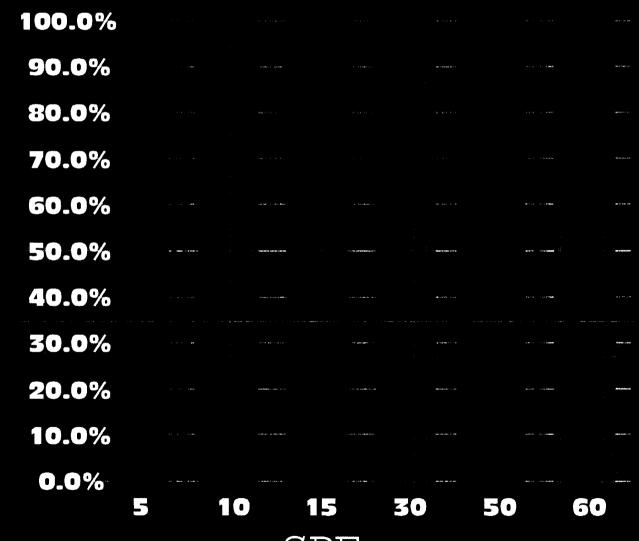
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#### High Risk vs. Low Risk for Skin Cancer

High Risk Many genetic abnomalities One UV "hit" may generate a tumor Intolerant to UV damage >SPF 30 for maximum effect

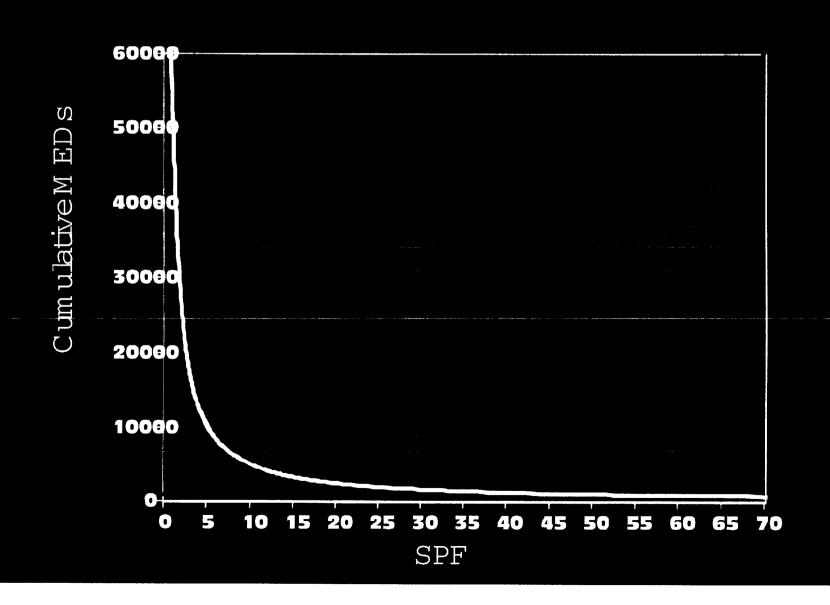
Low Risk No or few genetic abnormalities Many "hits" to generate a tumor **Tolerant to UV** damage SPF 30 adequate for lifetime cancer prevention?

#### Theoretical Effect of SPF on Incident UV



SPF

#### Need for Greater Protection with Higher Cumulative UV Doses



### Annual MEDs in Selected U.S. Cities

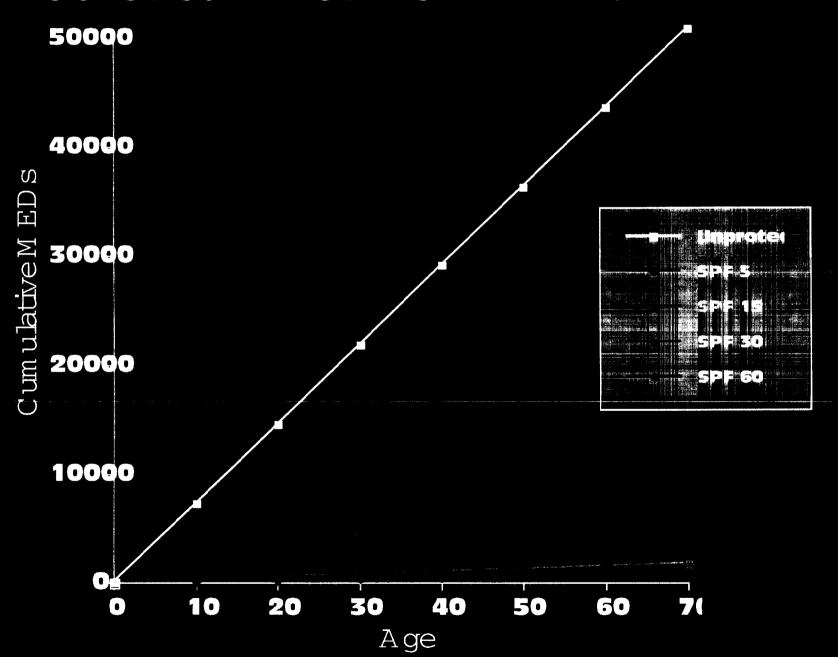
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Source Nole GE, Johnson AW, Cheney MC, Znaiden A. Cumulative lifetime UVR exposure in the United States and the effect of various levels of sunscreen protection. Cosmetic Dermatology.

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#### **Theoretical Lifetime MED Reductions**



#### Lifetime MED Values<sup>1</sup>

SPF	0	5	10	15	30	50	60
0	0	0	0	0	0	0	0
10	7266	1453	727	484	242	145	121
20	14532	2906	1453	969	484	291	242
30	21798	4360	2180	1453	727	436	363
40	29064	5813	2906	1938	969	581	484
50	36330	7266	3633	2422	1211	727	606
60	43596	8719	4360	2906	1453	872	<b>727</b>
70	50862	10172	5086	3391	1695	1017	848

<sup>1</sup>Daily IdealUse; FortWorth, TX., 10% TotalU

#### Two-Year SPF Comparison<sup>1</sup>

SPICumulative MEDs (2 yr)

Improvement Absolute
Over Improvement
Preceding
SPF

Absolute Apparent
Improvement Improvement
Over
Previous

SPF

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1Daily IdealUse; FortWorth, TX., 10% TotalU

# Important Goals for Sunscreen Use

Photosensitivity
Protection

Cancer Prevention Genetic
Damage
Prevention

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